Operating method of membrane separation apparatus for purifying waste water, involves supplying biological treatment liquid mixed with gas to membrane separation unit, clean film elements of membrane separation unit.

```
L20 ANSWER 75 OF 121 WPINDEX COPYRIGHT 2002 DERWENT INFORMATION LTD
     2001-568380 [64]
                         WPINDEX
AN
DNC C2001-168995
     D15 J01
DC
PA
     (DAIL) DAICEL CHEM IND LTD
CYC 1
     JP 2001205055 A 20010731 (200164)*
                                                  6p
PΙ
ADT JP 2001205055 A JP 2000-22196 20000131
PRAI JP 2000-22196
                      20000131
     2001-568380 [64]
                         WPINDEX
     JP2001205055 A UPAB: 20011105
AB
     NOVELTY - Initially the filtering operation is stopped, and a circulating
     pump (3) is made to mix gas with biological treatment liquid of a
     bioreaction tank (1) and is supplied to membrane separation
     unit, to clean film elements (6) of membrane separation unit.
     The gas bubbles are removed from liquid and the liquid is returned to
     bioreaction tank. The cleaning operation of film elements is performed
     intermittently.
          DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for
     membrane separation apparatus.
          USE - For purifying domestic, industrial waste water, human waste
          ADVANTAGE - The adherence of sludge to film element is reduced by
     contacting gas bubbles with film elements, hence filtration efficiency of film element is enhanced. Excess aeration is prevented, since gas bubbles
```

are removed from liquid before being returned to bioreaction tank.

DESCRIPTION OF DRAWING(S) - The figure shows the outline diagram of membrane separation apparatus. (Drawing includes non-English language

Bioreaction tank 1 Circulating pump 3 Film elements 6 Dwg.1/1

© 2001 Sopheon Corporation All rights reserved